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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/754,521	01/08/2004	James Hoyt Beatty	TI-33868.1	8258
23494	7590	11/30/2005	EXAMINER	
TEXAS INSTRUMENTS INCORPORATED P O BOX 655474, M/S 3999 DALLAS, TX 75265			LU, JIPING	
			ART UNIT	PAPER NUMBER
			3749	

DATE MAILED: 11/30/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/754,521

Applicant(s)

BEATTY ET AL.

Examiner

Jiping Lu

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 20 September 2005.
- 2a) ☒ This action is FINAL. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 14-34 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 22-34 is/are allowed.
- 6) ☒ Claim(s) 14-21 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 14-15 are rejected under 35 U.S.C. 102(b) as being anticipated by Gorin et al. (U. S. Pat. 5,332,200).

Gorin shows a method of changing furnace liner 36-42 by removing the old liner 36-42 with a fixture 64 and inserting a new liner 36-42 same as claimed (col. 2, lines 45-60).

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 16-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gorin et al. (U. S. Pat. 5,332,200).

The method of performing a liner change of Gorin as above includes all that is recited in claims 16-21 except for the type and temperature of furnace and the liner removing and inserting rate. It would have been an obvious matter of design choice to use any desired furnace at any desired temperature and to remove and insert the liner at any desired rate in order to obtain the optimum result since applicant has not disclosed that the claimed furnace type and temperature and liner removing and inserting rate solve any stated problem in a new or unexpected way or is for any particular purpose which is unobvious to one of ordinary skill in the art.

6. Claims 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Gabor et al. (U. S. pat. 5,547,512) in view of Gorin et al. (U. S. Pat. 5,332,200).

Patent to Gabor et al. shows a method of changing furnace liner by removing the old liner 58 and inserting a new liner same as claimed. However, patent to Gabor et al. does not show the old liner was removed by a fixture. Patent to Gorin et al. teaches a concept of removing the old liner 36-42 with a fixture 64 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the furnace liner change method of Gabor et al. to include a step of removing the old liner with a fixture as taught by Gorin et al. in order to facilitate the removing of old liner. With regard the type and temperature of furnace and the liner removing and inserting rate, it would have been an obvious matter of design choice to use any desired furnace at any desired temperature and to remove and

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insert the liner at any desired rate in order to obtain the optimum result since applicant has not disclosed that the claimed furnace type and temperature and liner removing and inserting rate solve any stated problem in a new or unexpected way or is for any particular purpose which is unobvious to one of ordinary skill in the art.

7. Claims 14-21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Graham (U. S. Pat. 6,698,493) in view of Gorin et al. (U. S. Pat. 5,332,200).

Patent to Graham shows a method of changing furnace liner by removing the old liner 28 and inserting a new liner same as claimed. However, patent to Graham does not show the old liner was removed by a fixture. Patent to Gorin et al. teaches a concept of removing the old liner 36-42 with a fixture 64 same as claimed. Therefore, it would have been obvious to one having ordinary skill in the art at the time the invention was made to modify the furnace liner change method of Graham to include a step of removing the old liner with a fixture as taught by Gorin et al. in order to facilitate the removing of old liner. With regard the type and temperature of furnace and the liner removing and inserting rate, it would have been an obvious matter of design choice to use any desired furnace at any desired temperature and to remove and insert the liner at any desired rate in order to obtain the optimum result since applicant has not disclosed that the claimed furnace type and temperature and liner removing and inserting rate solve any stated problem in a new or unexpected way or is for any particular purpose which is unobvious to one of ordinary skill in the art.

Allowable Subject Matter

8. Claims 22-34 are allowed.

Response to Arguments

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9. Applicant's arguments filed 9/20/2005 have been fully considered but they are not persuasive to overcome the rejection. First broad claim 1 presented fail to define over the prior art references. The applicant is requested to point out any limitations that the references do not teach or shown. Second, the examiner would not give any patentable weight to "semiconductor furnace" because there is no difference recited in the broad claim 1 as to what constitutes "semiconductor furnace". It is the examiner's position that all references cited in the case are capable to treat or heat "semiconductor". Therefore, they are "semiconductor furnace". It is also the examiner's position that all references cited in this case is made of "semiconductor" material and capable of insulating heat for safety purposes. Thus, they are all "semiconductor furnaces". The applicants have repeated argued that there was no suggestion in Gorin patent that "its furnace is in operation and heated when the liner is removed". However, broad claim 1 contains 36 words and does not require such conditions. Broad claim 1 merely calls for "removing a heated liner from the operating heated furnace with a fixture and inserting a replacement liner into the operating heated furnace". Gorin et al patent clearly meets the broad claim 1. The removal and replacement of liner is preformed from this operating heated furnace. The examiner assumes all prior art references are operational for heating purposes when rejecting the broad claims. Third, page 7, the applicant argued that there is no disclosure or suggestion in the references of performing a liner change from an operating heated semiconductor furnace. The examiner disagrees. Again, the old furnace liner 58 in semiconductor furnace 10 of Gabor et al is removed and replaced from the operating heated furnace 10. This furnace is operational for heating purposes. Nowhere in the broad claim 1 positively claiming that the removal and replacement of liner is carried out while the furnace is

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in operation and heated. The examiner cannot interpret the broad claim 1 overly narrow. Patent to Gorin et al. teaches a concept of removing the old liner 36-42 with a fixture 64 same as claimed. Therefore, it is the examiner's position in view of the combined teachings of the references, one skilled in the art would be able to derive the broadly claimed removal and replacement of furnace liner from an operational or functional furnace. Fourth, the applicant again argued that the Graham failed to disclose or suggest the removal and replacement of liner from semiconductor furnace. The examiner simply disagrees with the argument because the broad claim 1 failed to define over the art. Graham shows a method of changing furnace liner by removing the old liner 28 and inserting a new liner same as claimed. Patent to Gorin et al. teaches a concept of removing the old liner 36-42 with a fixture 64 same as claimed. Therefore, one skilled in the art with the combined teachings of the references, it would have been obvious to modify the furnace liner change method of Graham to include a step of removing the old liner with a fixture as taught by Gorin et al. in order to facilitate the removing of old liner. Finally, the dependent claims 15-21 contain no active steps. The applicant also failed to present any arguments regarding those dependent claims 15-21. Therefore, they are deemed to be admitted as obvious.

Conclusion

10. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO


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MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

11. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Jiping Lu whose telephone number is 571 272 4878. The examiner can normally be reached on Monday-Friday, 9:00 AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, EHUD GARTENBERG can be reached on 571 272-4828. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


Jiping Lu
Primary Examiner
Art Unit 3749

J.L.